Administrative Leadership Meeting

Tuesday, Sept. 9, 2014
Chancellor Randy Woodson
Upcoming ALM Topics

- Nov. 11
  Report Card on Strategic Plan
  (Titmus Theatre)

- Jan. 13, 2015
  Advancement Update
  (Titmus Theatre)
Fall 2014 Enrollment

(All numbers preliminary until final reports)

• New freshman class has 4,375 students
  – Mean SAT = 1241
  – Mean HS GPA = 4.44
  – In top 10% of HS class = 51.4%
• New master’s students = 2,146
• New doctoral students = 674
• Total enrollment 33,991
US News Rankings 2015 Edition
(Released Tuesday, September 9, 2014)

- NC State national ranking 95th
  - up 6 places overall from last year
  - Public ranking 43rd, up 4 places from last year
- 14th in peer group, up from 15th last year
- Undergraduate Engineering ranked 31st
- Great Schools, Great Prices ranked 46th
- Best Colleges for Veterans ranked 18th
- On the list for graduates with least debt
  - 57% of graduates with debt, average $19,530
New Indoor Practice Facility

- A full 120-yard football field
- Four sprint lanes down the full length of the field
- Additional training and conditioning space beyond both end zones
- A viewing platform at the 50-yard line
- Remote-controlled video cameras
State Budget

• $1,000 salary increases for SPA employees

• No funding for EPA salary increases
  – Provides campus-level salary adjustment flexibility

• 5 non-expiring bonus days
State Budget

• $2.4 million in additional management flexibility reductions to the UNC System

• $3 million for Game-Changing Research investments including pharmacoengineering.

• $4.8 million to provide in-state tuition to military veterans and their dependents.

• $30 million for building repairs and renovations for all state government (UNC System receives 40% = $12 million).
State Budget

• Directs BOG to consider reducing centers and institutes by $15 million

• Requires university system appropriate $29 million to support the NC Research Campus in Kannapolis.

• Transfers of Camp Sertoma 4-H Camp from NC State to the Department of Environment and Natural Resources.

• UNC System employees may enroll in 3 courses free of charge

• Repeals Chancellor's authority to approve maintenance projects up to $1 million.

• Leasing Authority for property or space in any building on Centennial Campus extended to 99 years without approval from the Council of State.
Questions?
Navigating Space Management: Challenges, Actions and Opportunities

Steven Arndt, Associate Vice Chancellor for Facilities
Lisa Johnson, University Architect
Space Management: Challenges, Actions and Opportunities

- Intro/Background
- Current Space Utilization
- Past Initiatives Status
- New Initiatives
- Challenges
Why all the emphasis on Space Utilization and Management?

- Costly Resource
- Budgetary Constraints
- Growth Pressures
- Space Management Challenges
- Increased Accountability
- Utilization Opportunities
Space: A Costly Resource
## Annual Cost of Space is Significant

### Office & Classroom Maintenance & Operating Cost

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per ASF</td>
<td>$13.30 / ASF</td>
<td>$13.80 / ASF</td>
</tr>
<tr>
<td>Typical Office Annual Cost</td>
<td>$1,860</td>
<td>$1,930</td>
</tr>
<tr>
<td>Mid-Size Classroom Annual Cost</td>
<td>$8,650</td>
<td>$8,970</td>
</tr>
</tbody>
</table>

### Research Space Maintenance & Operating Cost

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per ASF</td>
<td>$19.70 / ASF</td>
<td>$20.10 / ASF</td>
</tr>
<tr>
<td>Mid-Size Research Lab</td>
<td>$17,730</td>
<td>$18,090</td>
</tr>
</tbody>
</table>

(Includes utilities, maintenance & equipment startup costs. Excludes deferred maintenance cost. Numbers are rounded to nearest ten.)

Source: NC State University, Facilities Budget Office
New Construction is Expensive

**Total Project Cost** (escalated to 2014)

- SAS Hall $304/GSF
- EB III $360/GSF
- Hunt Library $498/GSF
- Terry Center $561/GSF

*Excluding infrastructure*
Economic Constraints
State Capital Funding: 2008-Present

- Hunt Library
- 4H Camp Improvements
- Terry Companion Animal Hospital
- Engineering Building III

<table>
<thead>
<tr>
<th>Year</th>
<th>Renovation &amp; Repair</th>
<th>New Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>$13.6</td>
<td>$94.1</td>
</tr>
<tr>
<td>2008-09</td>
<td>$4.7</td>
<td>$102.2</td>
</tr>
<tr>
<td>2009-10</td>
<td>$5.9</td>
<td></td>
</tr>
<tr>
<td>2010-11</td>
<td>$2.1</td>
<td></td>
</tr>
<tr>
<td>2011-12</td>
<td>$12.2</td>
<td></td>
</tr>
<tr>
<td>2012-13</td>
<td>$2.1</td>
<td></td>
</tr>
<tr>
<td>2013-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FY2014-15 Funding pending bond sale

Source: NC State University, Facilities Division
Growth Pressures
Growth - High Priority Actions

• Growing faculty 350 T/TT
• Keeping and replacing faculty 50 per year
• Increasing student enrollment 2660
• Increasing postdocs 150
• Adding academic advisers 40
• New Living and Learning Villages 4

By 2020

Source: NC State University, Provost’s Office
Space Management Challenges

Source: AcademicImpressions.com
Space Management Challenges

• Underutilized Space

• Remold cultural attitude, i.e. …it’s my space!

• Space stewardship vs. ownership
Increased Accountability

http://www.northcarolina.edu/apps/bog/members.htm
UNC-BOG Efficiency & Effectiveness Metrics

Operating Metrics
1. Education and Related spending per degree*
2. UNC Compliance Index (UNC FIT)*
3. Support Spending per Student
4. Space Utilization: Average weekly use of student stations
5. Financial Stability: Private Fundraising Index

Academic Metrics
1. Six-Year Graduation Rate*
2. Freshman-to-Sophomore Retention Rate*
3. Degrees Granted to Pell Grant Recipients*
4. Degree Efficiency*
5. Attempted Hours to Degree

* Metrics currently in use

Source: 7-8-2014 ALM Presentation
Space Standards

UNC-GA Space Standards
• Classrooms
• Class labs
• Office
• Library space

NC State Space Standards
• Research space
• Design studio standard
Recurring Efficiency Themes

- Purchasing Efficiencies
- Eliminate Redundancies / Create Shared Services
- Consolidate IT Infrastructure
- Implement Enterprise Systems (PeopleSoft)
- Focus on Energy Reduction
- Improve Space Management
- Apply Metrics to Most Everything

Source: 7-8-2014 ALM Presentation
Utilization Opportunities

Current Space Inventory

- Office: 30%
- Research: 17%
- Special Use: 15%
- General Use: 10%
- Support: 6%
- Teaching Labs: 6%
- Open Labs: 3%
- Study / Library: 6%
- Health Care: 2%
- Classrooms: 5%
- Not including Housing

Source: NC State University, Office of the University Architect
Classroom Utilization Hours

Average Weekly Room Hours of Instruction in Classroom

Source: State of North Carolina Higher Education Comprehensive Planning Program, Facilities Inventory and Utilization Study
Classroom Utilization Occupancy

Fill Rate: Average Percentage of Classroom Stations Occupied per Section

Source: State of North Carolina Higher Education Comprehensive Planning Program, Facilities Inventory and Utilization Study
Teaching Lab Utilization Hours

Average Weekly Room Hours of Instruction in Teaching Lab

Source: State of North Carolina Higher Education Comprehensive Planning Program, Facilities Inventory and Utilization Study
Teaching Lab Utilization Occupancy

Fill Rate: Average Percentage of Teaching Lab Stations Occupied per Section

Source: State of North Carolina Higher Education Comprehensive Planning Program, Facilities Inventory and Utilization Study
Space Growth Over Time - Teaching

Classrooms: 77%
All Space: 33%
Class Labs: 21%
Credit Hours: 27%
Enrollment: 19%

Classrooms are 5% and Class Labs are 6% of total space inventory
Space Growth Over Time - Office

Office space 288,000 ASF (20%) over the space standard

Office Space: 49%

All Space: 33%

Personnel: 29%

Office space includes conference rooms and office support spaces
Office Space Utilization Issues

- Office sizes exceed space standard
- Facility Condition
- Offices used for other purposes
- Multiple offices

Ricks Hall 3rd Floor
Space Growth Over Time - Research

- All Space: 33%
- Research Space: 17%
- R&D Awards: 96%
- R&D Expenditures: 50%

Chart showing growth over time from 2000-01 to 2013-14.
Research Space

Research Space compared to Standard

<table>
<thead>
<tr>
<th>Year</th>
<th>Research Space (in ASF)</th>
<th>Standard (in ASF)</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>983,595</td>
<td>1,019,181</td>
<td>-3.5%</td>
</tr>
<tr>
<td>2012</td>
<td>982,572</td>
<td>1,017,698</td>
<td>-3.4%</td>
</tr>
<tr>
<td>2013</td>
<td>982,275</td>
<td>1,008,635</td>
<td>-2.6%</td>
</tr>
</tbody>
</table>
Recap of Challenges

• Space cost
• Funding reductions
• Growth
• Metrics
• Increased Scrutiny
• Utilization

The Perfect Storm?

Source: www.hardykika.blogspot.com
The Path Forward

Source: www.betheleverett.org/
Status on Efforts since 2011

1. Initiate College Space Analysis
2. Re-alignment & Strategic Plans Influence Space Allocations
3. Re-evaluate Research Space Standard
4. Connect Grant & Start-Up needs with Space
5. Decrease Lease Space
6. Review Rental Rate Structure
7. Repurpose Space

Source: 5-11-2011 ALM Presentation
1. College Space Analysis

**Process:**
- Every 3 to 4 years
- Last update: fall 2012

**Space Projections:**

**Current Space**
- Space standards /college space
- Compare to existing inventory
- Deficits and overages

**Future Space Needs**
- Projections
- Space standards
- College space needs by space type
# College Space Analysis

## Space Allocation Plan

**2011 Base Year Space Needs**

<table>
<thead>
<tr>
<th></th>
<th>a Current Space Available</th>
<th>b Current Space Need</th>
<th>c Current % Space Need Met a/b</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALS</td>
<td>1,000,240</td>
<td>893,869</td>
<td>112%</td>
</tr>
<tr>
<td>COD</td>
<td>106,495</td>
<td>126,225</td>
<td>84%</td>
</tr>
<tr>
<td>CED</td>
<td>78,416</td>
<td>87,740</td>
<td>89%</td>
</tr>
<tr>
<td>COE</td>
<td>695,838</td>
<td>598,008</td>
<td>116%</td>
</tr>
<tr>
<td>CNR</td>
<td>139,209</td>
<td>154,462</td>
<td>90%</td>
</tr>
<tr>
<td>CHASS</td>
<td>133,075</td>
<td>178,234</td>
<td>75%</td>
</tr>
<tr>
<td>COS</td>
<td>435,256</td>
<td>432,526</td>
<td>101%</td>
</tr>
<tr>
<td>COT</td>
<td>202,453</td>
<td>185,227</td>
<td>109%</td>
</tr>
<tr>
<td>CVM</td>
<td>386,845</td>
<td>402,763</td>
<td>96%</td>
</tr>
<tr>
<td>PCOM</td>
<td>53,672</td>
<td>53,071</td>
<td>101%</td>
</tr>
<tr>
<td>&quot;110&quot; Classrooms</td>
<td>255,977</td>
<td>252,138</td>
<td>102%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3,487,476</strong></td>
<td><strong>3,364,262</strong></td>
<td><strong>104%</strong></td>
</tr>
</tbody>
</table>

*New update to begin spring 2015 using fall 2014 base year data.*

Column "e" includes funded projects and top ten priorities of the 2015-17 6-Year Capital Plan.
## Capital Plan: Top 10 Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>New</th>
<th>Renovated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Engineering Building Oval</td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>2. Science Commons Building</td>
<td>52,000</td>
<td></td>
</tr>
<tr>
<td>3. Broughton Hall Renovation &amp; Addition</td>
<td>45,000</td>
<td>45,000</td>
</tr>
<tr>
<td>4. Dabney Hall Renovation</td>
<td></td>
<td>81,000</td>
</tr>
<tr>
<td>5. Page Hall Renovation</td>
<td></td>
<td>18,600</td>
</tr>
<tr>
<td>6. Mann Hall Renovation &amp; Addition</td>
<td>4,500</td>
<td>55,000</td>
</tr>
<tr>
<td>7. Plant Sciences Research Building</td>
<td>121,700</td>
<td></td>
</tr>
<tr>
<td>8. Gardner Hall Renovation &amp; Addition</td>
<td>15,000</td>
<td>51,000</td>
</tr>
<tr>
<td>9. Williams Hall Renovation</td>
<td></td>
<td>78,000</td>
</tr>
<tr>
<td>10. Daniels Hall Renovation, Phase II</td>
<td></td>
<td>39,100</td>
</tr>
<tr>
<td><strong>Total Assignable Square Feet</strong></td>
<td>374,200</td>
<td>367,700</td>
</tr>
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# College Space Analysis

## Space Allocation Plan

<table>
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<th>College</th>
<th>2011 Base Year Space Needs</th>
<th>2020 Future Space Needs / Proposed Space Allocation</th>
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<td></td>
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New update to begin spring 2015 using fall 2014 base year data
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4. Connect Grant & Start-Up needs with Space
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6. Review Rental Rate Structure
7. Repurpose Space

Source: 5-11-2011 ALM Presentation
2. Align Organizational Resources with Strategic Priorities

Progress:

Chancellors Faculty Excellence Program (CFEP)

- Provost Office/OUA team
- 44 cluster hire positions identified
- 33 positions filled
- 35 renovations / furniture projects completed
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Source: 5-11-2011 ALM Presentation
3. Re-evaluate Research Space Standard

- Discipline-based research space standard
- Revised in 2012
- Based on the site surveys & institution review

### 2002 PREVIOUS RESEARCH STANDARD

<table>
<thead>
<tr>
<th>Categories</th>
<th>per Research Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive</td>
<td>Avg of 300 ASF</td>
</tr>
<tr>
<td>Moderately Intensive</td>
<td>Avg of 125 ASF</td>
</tr>
<tr>
<td>Non – Intensive</td>
<td>Avg of 15 ASF</td>
</tr>
</tbody>
</table>

### 2012 REVISED RESEARCH STANDARD

<table>
<thead>
<tr>
<th>Categories</th>
<th>per Research Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Intensive</td>
<td>Avg of 225 ASF</td>
</tr>
<tr>
<td>Intensive</td>
<td>Avg of 125 ASF</td>
</tr>
<tr>
<td>Moderately Intensive</td>
<td>Avg of 60 ASF</td>
</tr>
<tr>
<td>Non – Intensive</td>
<td>Avg of 15 ASF</td>
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</tbody>
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Source: 5-11-2011 ALM Presentation
4. Connect grant & start-up needs with Space

CFEP Hires
Invested in start-up packages and space

Strategic Space Reserves

Connect with space needs early in process

Source: http://www.internsme.com/blog/settle-in-office
Status on Efforts since 2011

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Source: 5-11-2011 ALM Presentation
5. Decrease Lease Space SF

<table>
<thead>
<tr>
<th>Space in ASF</th>
<th>2010</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Units</strong></td>
<td>-12%</td>
<td>+45%</td>
</tr>
<tr>
<td><strong>Non-Academic Units</strong></td>
<td>-2%</td>
<td>-2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>58% Office</td>
<td>40% Research</td>
</tr>
</tbody>
</table>

2% Other
Status on Efforts since 2011

1. Initiate College Space Analysis
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Source: 5-11-2011 ALM Presentation
6. Review Rental Rate Structure
Centennial Campus

Status

• MOA’s aligned with updated F&A rate (58.9% to 63.5%)
• Resulted in overall average rent reduction of 10.1%
• Individual college reductions varied from 1.3% to 23%
• Effective July 2011
• First year rent savings (FY11-12): $332,321
Status on Efforts since 2011

1. Initiate College Space Analysis
2. Re-alignment & Strategic Plans Influence Space Allocations
3. Re-evaluate Research Space Standard
4. Connect Grant & Start-Up needs with Space
5. Decrease Lease Space
6. Review Rental Rate Structure
7. Repurpose Space

Source: 5-11-2011 ALM Presentation
7. Repurpose Space

- Office sizes exceed the space standard
- Poor Facility condition
- CFEP hires

Ricks Hall – Existing 3rd Floor
Repurpose Space

New space layout will provide additional personnel space:

- 6 more faculty offices
- 2 more staff stations
- 16 more Post Doc/Graduate Student stations
- Improved quality of space

Ricks Hall - 3rd Floor Renovation Plan
Repurpose Space

Biltmore Hall: Renovate outdated research lab space and...

Existing Research Labs – First Floor
Repurpose Space

Biltmore Hall: Renovation will provide updated research labs for Tree Improvement Program, future CFEP hire, and graduate student office space.
New Space Management Initiatives

Source: www.waltor.com
New Space Management Initiatives

- University Space Principles Updated
- New Space Management Software
- Tagging People to Space Initiative
- Research Productivity Measures
- Strategic Space Reserve
- Rewarding Innovation and New Ideas
Space Principles Updated

Preferred Space Priorities:

- University Strategic Plan initiatives = highest priority
- Assign all classrooms to R&R
- Hoteling
- Long-term storage off-campus
- 1 office per FT faculty/staff

Source: itservices.stanford.edu/service/workanywhere/hoteltouchdown
New Space Management Initiatives

• University Space Principles Updated

• New Space Management Software

• Tagging People to Space Initiative

• Research Productivity Measures

• Strategic Space Reserve

• Rewarding Innovation and New Ideas
New Space Management Software: FM: Interact

Benefits
- Space data linked to floor plans – streamlines data entry
- Departmental level access and management
- User friendly reporting

Progress:
- Transitioned data for 1,400 buildings and over 40,000 rooms
- Trained 100+ employees to date
- Departments can request access and training
New Space Management Initiatives

New Space Management Software: FM: Interact
New Space Management Initiatives

• University Space Principles Updated
• New Space Management Software
• Tagging People to Space Initiative
• Research Productivity Measures
• Strategic Space Reserve
• Rewarding Innovation and New Ideas
Tagging People to Space

- Office Space
- Research Space
- Software Interfaces
- Maintenance of Data
- Implementation: Fall 2014

Implementation team: OIT, OUA, HR, ComTech, C&G, OIRP

Source: http://search.dilbert.com/comic/Office%20Space
New Space Management Initiatives

- University Space Principles Updated
- New Space Management Software
- Tagging People to Space Initiative
- Research Productivity Measures
- Strategic Space Reserve
- Rewarding Innovation and New Ideas
Research Productivity Metrics

Grant Activity

Publications/Exhibits

Strategic Outreach/
Economic Development
Strategic Space Reserves

- Space Committee Request
- College Identified
- % of Space Need Met
- Repurposed space
- Investments
Strategic Space Reserves

Progress:
• Strategic Space Reserves requested: 85,766 ASF
• Academic Units response: 107,823 ASF for reassignment, renovation and/or repurposing

Status:
• Projects Completed: 56,762 ASF
• Under Study: 13,035 ASF
• Available: 38,026 ASF
New Space Management Initiatives

• University Space Principles Updated
• New Space Management Software
• Tagging People to Space Initiative
• Research Productivity Measures
• Strategic Space Reserve
• Rewarding Innovation and New Ideas
Reward Innovation and New Ideas

SAS Graduate Student Hoteling
• Doubled grad student occupancy: 18 to 36 (total 994 ASF)
• Gained four faculty offices (640 ASF)
• Amenities (36 assignable lockers w/power)
Reward Innovation and New Ideas

Industrial Extension Service
• Lease Space: 12,444 SF
• Reviewed space utilization & work style needs
• Extension personnel travel the state
• Solution includes several types of workstations

Research Building IV
Reward Innovation and New Ideas

Industrial Extension Service

- New work-style configuration
- 8,000 ASF - 36% space reduction
- Added amenities
- Accommodates local and traveling staff

Research Building III
Moving Forward

Source: www.latitude.com
Moving Forward

Goal: **Classrooms** meet the UNC-GA utilization goal of a campus average of 35 hours per week and 65% fill ratio

**Actions:**

- Provide consistent technology and support
- Spread courses throughout the day
- Match classroom inventory with changing demands (size, seating type, etc.)
- Balance innovative pedagogy & scheduling efficiency
Moving Forward

Goal: **Class Labs** meet the UNC-GA utilization goal of 20 hours per week and 75% fill ratio

**Actions:**
- Require consistent scheduling
- Promote cross-departmental sharing of class labs
- Analyze UNC System Space Standard to verify metrics
Moving Forward

Goal: Reduce the **Office and Support Space** SF per person to more closely align with UNC-GA standard

Actions:
- Identify, analyze, and address underutilized space
- Centralize scheduling of conference rooms
- Change Culture!
Goal: Develop additional metrics for managing/growing Research Space

Actions:

- Develop discipline-specific productivity metrics
- Assign space at the lab bench level
- Further development of a campus-wide strategy for equipment
- Continue to reallocate underutilized space for strategic priorities
- Identify funding for improvements
Questions?

Steve Arndt: saarndt@ncsu.edu
Lisa Johnson: lhjohns2@ncsu.edu